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**In the  
Supreme Court of the United States**

OCTOBER TERM, 1983

MILGO ELECTRONIC CORPORATION, ET AL.,  
PETITIONERS,

v.

CODEx CORPORATION, ET AL.,  
RESPONDENTS.

PETITION FOR A WRIT OF CERTIORARI TO  
THE UNITED STATES COURT OF APPEALS  
FOR THE FIRST CIRCUIT

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**QUESTIONS PRESENTED FOR REVIEW**

1. Did procedural due process require the First Circuit to rule, as the Second Circuit has twice done, that a District Court must state that it is applying, and must apply, the "clear and convincing" standard of proof, before reaching the conclusions (a) that the petitioner-patentee, as well as its trial counsel and the inventor, were guilty of the "deliberate fabrication" of a "theory of patentability", where the petitioner contended that such theory was based upon specific language in the patent upheld by the Tenth Circuit, and (b) that the imposition of punitive fees of almost \$700,000 was warranted?
2. Did the refusal of the Court of Appeals to focus on and evaluate the technical and legal significance of the language of the patent specification said to describe the distinguishing feature of the invention, nullify property rights which the Tenth Circuit Court of Appeals validated after such an evaluation? And did such refusal, combined with its failure to correct serious errors of law committed by the District Court, including reliance on purported material admissions which concededly are non-existent, require reversal or remand?

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v.

CODEX CORPORATION, ET AL.,

RESPONDENTS.

**PETITION FOR A WRIT OF CERTIORARI TO  
THE UNITED STATES COURT OF APPEALS  
FOR THE FIRST CIRCUIT**

The petitioner, Milgo Electronic Corporation,<sup>1</sup> petitions for a writ of certiorari to review the judgment of the United States Court of Appeals for the First Circuit in this case.

**Opinions Below**

The opinion of the Court of Appeals, (App. G, *infra*) is reported at 717 F.2d 622. The opinions of the district court (the "Boston Court") (App. D and E, *infra*) are reported at 534 F.Supp. 418 and 541 F.Supp. 1198.

**Jurisdiction**

The judgment of the Court of Appeals (App. F, *infra*), was entered on August 2, 1983. A petition for rehearing *en banc* was denied on September 9, 1983. (App. H). On November 22, 1983

<sup>1</sup> Pursuant to Rule 28.1 disclosure is made that: Petitioner (later Racal-Milgo, Inc.) was acquired in 1977 by Racal Electronics Ltd., now Racal Electronics P.L.C., located in the United Kingdom. Petitioner is held by its ultimate parent through two wholly-owned U.S. holding companies, Racal Holdings, Inc. and Racal Electronics, Inc. Its subsidiaries (of which International Communications Corporation is one) are all wholly-owned subsidiaries. The affiliates of petitioner are as follows: Racal Communications, Inc.; Racal Avionics, Inc.; R.E. Grimm Company; Racal Airstream, Inc.; Racal Security, Inc.; Racal Recorders, Inc.; Megapulse, Inc.; Microsystems, Inc.; Racal-Dana Instruments, Inc.; Racal-Redac, Inc.; Racal-Redac Systems, Inc.; Racal-Redac Technical Evaluation Center, Inc. and Decca Electronics, Inc.

Justice Brennan extended the time within which to file a petition for a writ of certiorari to February 6, 1984. The jurisdiction of this Court is invoked under 28 U.S.C. § 1254(1).

### **Constitutional Provisions and Statutes Involved**

The Fifth Amendment to the Constitution of the United States provides in pertinent part:

No person shall . . . be deprived of life, liberty, or property, without due process of law; . . .

The Patent Act, Title 35 U.S. Code, provides in pertinent part:

#### **§ 101. *Inventions Patentable***

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

#### **§ 102. *Conditions for Patentability; Novelty and Loss of Right To Patent***

A person shall be entitled to a patent unless—

(a) the invention was known or used by others in the country, or patented or described in printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or

(c) he has abandoned the invention, or

(d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States, or

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an



international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent, or

(f) he did not himself invent the subject matter sought to be patented, or

(g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

#### § 103. *Conditions for Patentability; Non-Obvious Subject Matter*

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

#### § 112. *Specification*

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

A claim may be written in independent or, if the nature of the case admits, in dependent or multiple form.

Subject to the following paragraph, a claim in dependent form shall contain a reference to a claim previously set forth and



then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

A claim in multiple dependent form shall contain a reference, in the alternative only, to more than one claim previously set forth and then specify a further limitation of the subject matter claimed. A multiple dependent claim shall not serve as a basis for any other multiple dependent claim. A multiple dependent claim shall be construed to incorporate by reference all the limitations of the particular claim in relation to which it is being considered.

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

#### § 282. *Presumption of Validity; Defenses*

A patent shall be presumed valid. Each claim of a patent (whether in independent, dependent, or multiple dependent form) shall be presumed valid independently of the validity of other claims; dependent or multiple dependent claims shall be presumed valid even though dependent upon an invalid claim. The burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity.

The following shall be defenses in any action involving the validity of infringement of a patent and shall be pleaded:

- (1) Noninfringement, absence of liability for infringement or unenforceability;
- (2) Invalidity of the patent or any claim in suit on any ground specified in part II of this title as a condition for patentability;
- (3) Invalidity of the patent or any claim in suit for failure to comply with any requirement of sections 112 or 251 of this title;
- (4) Any other fact or act made a defense by this title.

In actions involving the validity or infringement of a patent the party asserting invalidity or noninfringement shall give notice

in the pleadings or otherwise in writing to the adverse party at least thirty days before the trial, of the country, number, date and name of the patentee of any patent, the title, date, and page numbers of any publication to be relied upon as anticipation of the patent in suit or, except in actions in the United States Court of Claims, as showing the state of the art, and the name and address of any person who may be relied upon as the prior inventor or as having prior knowledge of or as having previously used or offered for sale the invention of the patent in suit. In the absence of such notice proof of the said matters may not be made at the trial except on such terms as the court requires.

#### § 285. *Attorney Fees*

The court in exceptional cases may award reasonable attorney fees to the prevailing party.

#### Statement of the Case

The petitioner, Milgo Electronic Corporation,<sup>2</sup> is the owner of United States patent No. 3,524,023, a combination patent commonly denominated Whang '023. (App. A). Sang Whang, a native-born Korean, an employee of Milgo in 1966, but not at the time of trial below in 1980, assigned the patent to Milgo. This patent, applied for on July 14, 1966 and issued on August 11, 1970, is entitled "Bandlimited Telephone Line Data Communication System." It was found valid by the United States District Court for the District of Kansas (the Kansas Court) 189 USPQ 160 (D. Kansas 1976) (App. B) and affirmed by the Tenth Circuit Court of Appeals. 623 F.2d 645 (CA 10), *cert. denied*, 449 U.S. 1066 (1980). (App. C). The patent represented a significant breakthrough in modern technology.

For a helpful, thorough discussion of the prior art, the file history, and the technology, petitioner refers the Court to Judge Templar's opinion attached hereto as Appendix B (App. B). The technology discussed herein has been minimized to that central to a determination of the questions presented. The patents in dispute

<sup>2</sup> In 1977 Milgo Electronic Corporation changed its name to Racal-Milgo, Inc. Subsequently, an additional name change occurred and the company is now called Racal Data Communications, Inc. The petitioner will be referred to as either "petitioner" or "Milgo" throughout this petition.

The respondents below were Codex Corporation and its customer, Yellow Freight System, Inc.

relate to devices known as "modems" (an abbreviation of "modulator-demodulator") which allow computers to "communicate" with each other over ordinary telephone lines. Modems convert digital computer data (information) into an electrical signal at the sending point, transmit the signal through the telephone line and then re-convert the signal into computer data at the receiving point.

The Whang '023 patent was a combination of elements old in the art. In essence, the patent claimed an invention by combining differential phase modulation, a passband described as 1/T Hz (based on principles described by a scientist named Nyquist), center sampling and severe "band limiting" (the use of a "narrow" rather than "wide" "skirted" filter) *to reject energy as much as possible outside of the channel* through which the signals or energy containing the data transmitted from one computer to another, over ordinary telephone lines, passed. By finding that Whang's described modem system "was a radical departure from the approach of other contemporary modem designers, and successfully utilized a method of data transmission generally regarded as unfeasible," (App. D-14), the Boston Court agreed with the conclusion of the Kansas Court that "the Whang approach represented a new and novel conceptual theory that went against the state of the then existing modem art. . . ." (App. B-28). The Kansas Court and the Boston Court both described the Whang '023 invention as a "breakthrough," but they disagreed as to why. The Kansas Court said:

His approach was based on the theory that a modem that would perform the best and adequately over a lousy line would perform adequately over any line. . . Whang's invention combined both 8 level modulation and extreme band limiting into one modem. (App. B-28).

The Boston Court found that:

Whang did indeed make a practical breakthrough, but it was not the result, as the Kansas Court thought, of the narrow skirted filter. (App. D-26).

The Tenth Circuit Court of Appeals affirmed the Kansas Court in all respects and summarized the heart of the Whang invention:

The Court found, and we agree, that the Whang '023's utilization of differential 8-phase modulation of a single carrier and narrow bandwidth filtering was contrary to the prior art; that Whang *was the first to employ narrow band limiting in a phase modulating system*; that modems incorporating the Whang '023 were the first commercially acceptable modems capable of transmitting 2400 bps over ordinary switched voice-grade telephone lines; that *prior to the Whang '023 the modem industry felt that best results could be achieved by modems incorporating 'wide band energy spectrum and 2 or 4 level modulation'*; that Whang approached the problem with a completely opposite philosophy *and was the first to combine eight level modulation and extreme band limiting into one modem*. (App. C-13). (emphasis added)

The Boston Court reached a completely different substantive result, holding that the extreme narrow bandwidth feature of the patent *did not exist* and ultimately concluded it was a "deliberate fabrication" of the inventor and his attorney.<sup>3</sup> (App. D-10 and D-27). The court, notwithstanding the file history, was led to believe petitioner did not view "bandlimiting" as the novel feature of its invention because on March 27, 1969, Jones filed an amendment with the Patent Office in which he was said to have "misrepresented" language in the "Irland Reference" as not describing "center sampling." Although the reference had been independently examined and evaluated by the examiner, the Boston Court apparently thought that Jones was claiming "center sampling" as a non-obvious improvement over Irland and concluded:

*The assumed novelty of combining center sampling with the other elements of present claim 25 was apparently a significant factor in securing the allowance of present claims 1, 19, and 25 of the '023 patent.* (App. D-15). (emphasis added).

Furthermore, without making any subsidiary findings describing their pertinence, the Boston Court found that three pieces of "significant prior art" were not considered by the patent examiner.

<sup>3</sup> Present counsel for the petitioner was engaged subsequent to the time the original opinion and order for judgment was filed. Attorney Stanley Jones was patent counsel for Milgo starting in 1968, and was trial counsel in the Kansas and Boston proceedings.

As a result of these two "findings," the Boston Court concluded the statutory presumption of validity of Whang '023 had been rebutted. (App. D-26).

### The Kansas Litigation

UBC, a major competitor of petitioner, made a "Chinese Copy" of the Milgo 4400/48 model modem, a 4800 bps modem found by both Kansas and Boston Courts to incorporate Whang's invention. (App. D-16 and App. B-51). Petitioner claimed only that the UBC 4800 bps modem infringed the Whang '023 patent. (App. B-51).

During the Kansas pretrial proceedings, art not before the Patent Office and not known to Whang—Bennett & Davey, Data Transmission (1965)—was discovered to exist. Bennett & Davey, two Bell engineers, in their text, discussed and compared the strengths and weaknesses of prior art modems as of 1965. They expressed a preference for the use of amplitude modulated modems over phase modulated modems. For phase modulated modems,<sup>4</sup> Bennett & Davey taught a preference for the use of wide skirted filters with 100% "cosine roll-off," such as the Bell 201 Models.<sup>5</sup> One of the reasons for this preference was that wide skirted modems permitted more practical correction of delay distortion, and a phase modulated modem with 100% "roll-off" would require *no* additional special delay (distortion) correcting circuits.

Whang developed the first working 8-phase modulated modem which was capable of operating at the then high speed of 2400 bps over the regular telephone network. (App. D-13-14). Engineers at Western Union familiar with existing modem design philosophy were concerned that the skirts of the modem demonstrated by Milgo were *too narrow* to work.<sup>6</sup> The first commercial model of the modem was the Milgo 4400/24PB which was publicly introduced in the fall of 1966.<sup>7</sup> This modem was the

<sup>4</sup> A VIII: 4719-4720, 4729-4731. These are excerpts from the Boston record. The designation App. — refers to the Appendix to this petition.

<sup>5</sup> A V: 3164-3171; 3257-3258, 3261.

<sup>6</sup> A VIII: 4599.

<sup>7</sup> A VIII: 5069; X: 6229; IX: 5589; IV: 2370-2371, 2381, 2549.



first commercial modem to operate reliably at 2400 bps on the regular telephone network and had "narrow skirts."<sup>8</sup>

In mid-1967, Milgo, at the request of Western Union, modified a preproduction prototype modem.<sup>9</sup> This modified modem was termed the WU2247.<sup>10</sup> It was not designed for simultaneous voice and data communication and had "wider" skirts than the production prototype modem.

Since the Whang '023 patent described narrow skirts achieved by severe band limiting only *qualitatively*, i.e., in terms of energy rejection, Whang was asked during the Kansas trial to express mathematically the composite filter means of his patent in equivalent *quantitative* terms of the theoretical cosine roll-off model employed by Bennett & Davey. Whang theorized that one of ordinary skill in the art would determine from the language of his preferred embodiment that negligible energy existed at the 1000 Hz point. By negligible, he meant a range of energy of about 1 to 2 percent. Translated into Bennett and Davey's cosine roll-off model, this meant to Whang about 50% roll-off. (App. I)

The Kansas Court found that Whang's invention with its filter means represented a nonobvious improvement over Bennett & Davey's preference for 100% cosine roll-off for phase modulated systems. (App. B-42, B-43).

However, the legal construction given to the claims used in the Whang '023 was Judge Templar's interpretation that the claimed invention embodied a filter means designed "to reject, *within a few percent*," all signals having a frequency outside of 1000 Hz for either a 2400 bps system with an 800 Hz passband or 2000 Hz for a 4800 bps modem with a 1600 Hz passband, using 8 phases. (App. B-48). This appears to be a satisfactory quantitative description.

The Kansas Court's construction of the claims incorporates the crucial language of the specification expressing the novel principle, recognized by those skilled in the art, that, contrary to

<sup>8</sup> A IX: 5593-5607; A X: 6289; IV: 2549. See A X: 6192.

<sup>9</sup> A IV: 2577-2578; VII: 4236-4238.

<sup>10</sup> A X: 6185-6186.

prior art phase-modulated systems using a wide band energy spectrum which necessarily rejected components of signal *as little as possible*,<sup>11</sup> in Whang's systems:

It has been found that it is better to *reject* unnecessary signal components [energy] outside the selected narrow band *as much as possible*. (Col. 6:3-5, App. A-10). (emphasis added)

No argument was ever made by either party in the Kansas proceeding that the patent issued because the patent examiner was led to believe that the novel feature of the claimed combination was "center sampling." The Whang '023 patent was held valid and infringed, and Milgo was awarded several million dollars in damages, together with attorneys' fees under 35 U.S.C. § 285.

In the late summer of 1980, prior to the trial in Boston, Whang discovered that the filter means used in the WU2247, a modified model of the 4400/24PB, did not have "equivalent cosine roll-off" of 50% or less.<sup>12</sup>

The Kansas Court and the Tenth Circuit Court of Appeals were so notified, by attorney Jones, but neither Court has taken action as of this date.

### **The Boston Decision**

The Boston Court accurately understood the asserted novelty of the Whang '023 patent in the *oral* phraseology chosen by Whang himself:

He says the novelty of his invention is the combination of these elements [differential phase modulation, limiting the passband to 1/T Hz and center sampling] with *severe band*

<sup>11</sup> A III: 1477.

<sup>12</sup> Dr. Miller, a Codex expert, conceded that there was no recognized method of calculating "equivalent cosine roll-off" even as of 1980. A III: 1682. Nevertheless, the Boston Court relied heavily on Codex-prepared computer-generated curves presented by Dr. Miller purporting to calculate various Milgo modem spectral curves and to present those curves in "equivalent cosine roll-off." (App. D-15-16). There is concededly no record support for the Boston Court's finding that some 4400/24PB modems had close to 100% cosine roll-off. A IV: 2551-2552.



*limiting*. By severe band limiting, he means a passband of 1/T Hz and confinement of substantially all the passed energy within the 'sweet spot'.<sup>13</sup>

[I]n drawing the specification in the '023 patent he claims to have used the phrase '1/T Hz passband' in a special sense to include the confinement of substantially all the energy [components of signal] within the 'sweet spot'.

[A]ccording to Whang, specifications made it clear that substantially all of the energy outside the 'sweet spot' should be attenuated [rejected]. (App. D-18-19) (emphasis added) [bracketed material inserted for clarity].

The Boston Court understood that the modems involved in this proceeding utilized a filter using principles developed by Nyquist, which ideally transmitted energy only through a defined channel; the Court found that such an ideal filter could not be built. The Court also recognized that the "skirts" refer to the frequency ranges outside the Nyquist channel or passband at which some significant energy is, in actual practice, transmitted. (App. D-11-12).

The language in the patent specification relied upon by the petitioner as teaching the use of narrow skirts says unequivocally:

It has been found that it is better to reject unnecessary signal components outside the selected narrow band '*as much as possible*'. Col. 6:3-5 (App. A-10) (emphasis added),

but was never focussed upon by either the Boston Court or the Court of Appeals in their opinions. The absence of evaluation is important, because in questioning Codex Vice President and expert Forney, the Court was told, from the perspective of one of

<sup>13</sup> The Boston Court found:

In the early 1960's, when the modem described in the '023 patent was devised, the 'sweet spot' was thought to be a band of about 1000 Hz in a range between the frequencies of 1200 Hz and 2200 Hz. Since that time the telephone network has improved and the useable 'sweet spot' for modems may be somewhat wider. (App. D-6-7).

ordinary skill in the art, *what the relationship was between increased rejection of components of signal and "wide" and "narrow" skirts:*

THE COURT: Do you get increased rejection of components of signal outside the band when the skirts are wide?

THE WITNESS: No.

THE COURT: You get increased rejection when the skirts are narrow?

THE WITNESS: Yes, that says the sharper you make the skirts, the worse your delay distortion problem is going to be.

This evidence was brought to the attention of the Court of Appeals to no avail. Apparently based on this testimony, the Boston Court found:

The narrower the skirts, i.e., the lower the percentage roll-off, the more efficient the filter is at attenuating [rejecting] the energy outside the passband.

Sharp roll-off also increases the delay distortion within the passband, as well as increasing the difficulty in recovering 'clock' from the signal envelope, which depends upon the energy outside the passband. (App. D-12).

The central issue of whether Whang '023 taught the use of "narrow skirts," given Forney's testimonial admissions and the Boston Court's findings, turned on whether and to what extent Whang's patent specification taught the rejection of either *more energy* outside the selected band (narrow skirts) or the rejection of *less energy* outside the selected band (wide skirts).

Although Whang's patent specification was very specific in answering that question at Col. 6:3-5 (App. A-10), this specific language was never grappled with nor construed by either the Boston Court or the Court of Appeals, notwithstanding its unquestioned materiality given Forney's admissions. Because of this omission, and other critical errors, the Boston Court and the Court of Appeals joined in concluding:

*The asserted novelty*, a composite filter roll-off of less than 50%, is nowhere stated in any of the claims or specifications of the patent, *either expressly or by implication*. Since there is no novelty, there is no invention. (App. D-27, App. G-7). (emphasis added).

One major factor in the Boston Court's conclusion that this was an "exceptional case" was its belief that Whang testified his patent specification taught an engineer to construct a filter anywhere from "0 to 100% cosine roll-off." (App. D-21). Another was its belief that Ragsdale, the inventor of another patent asserted below, *admitted*, his claims had *no novelty*. As the Court of Appeals was told, and as Codex essentially conceded, there is no record support for either finding.

The Boston Court's decision is silent on the question of whether it applied the "clear and convincing" standard of proof in making the many subsidiary determinations supporting its ultimate conclusion of "deliberate fabrication" and its consequent punitive award pursuant to 35 U.S.C. § 285.

#### Reasons for Granting the Writ

- I. THIS COURT SHOULD RESOLVE THE CONFLICT BETWEEN THE FIRST AND SECOND CIRCUITS AS TO WHETHER A DISTRICT COURT MUST BOTH ARTICULATE AND APPLY A "CLEAR AND CONVINCING PROOF" STANDARD WHEN DETERMINING EXCEPTIONALITY UNDER 35 U.S.C. § 285.

There is now a clear conflict between the First and Second Circuits as to the vital necessity for a trial judge to *expressly articulate* and actually apply the "clear and convincing" standard of proof when making findings of serious misconduct in patent litigation as a predicate to imposition of a punitive award of attorneys' fees pursuant to 35 U.S.C. § 285 which this Court should resolve. As to the penal character of such an award, see, *Spound v. Mohasco Industries, Inc.*, 534 F.2d 404, at 410 (CA 1) ("penalty relief"), *cert. denied*, 429 U.S. 886, *reh. denied*, 429 U.S. 988 (1976); *Hutto v. Finney*, 437 U.S. 678, at 691-92 (1978), *reh. denied*, 439 U.S. 1122 (1979).

The clear and convincing standard of proof has been used increasingly as an important protection against erroneous fact finding in serious matters far broader than the patent context of this case, see, *Santosky v. Kramer*, 455 U.S. 745 (1982) and cases collected. Given the difficulties and disputes inherent in appellate review of cases where the standard is required to be applied,<sup>14</sup> in theory, see *Jones v. Pitt County Board of Education*, 528 F.2d 414, 417-418 (CA 4 1975); *Elrick Rim Co. v. Reading Tire Machinery Co.*, 264 F.2d 481, 488 (CA 9), cert. denied, 360 U.S. 920 (1959), it is essential that there be absolute certainty that the trial court clearly understands its obligation to apply this standard. The only sure safeguard is to require the trial judge to state that he has done so. The alternative, permitting silence, can only result in increased appellate review based upon uncertainty.

In the present case a patentee whose patent had been previously upheld by the Tenth Circuit (App. C), was found by the Boston Court to have engaged in "deliberate fabrication" of the "theory of patentability" and assessed attorneys' fees of \$678,832.50 although the Boston Court displayed no awareness that such a draconian finding and sanction must be based on the heightened level of proof required by the "clear and convincing" standard.<sup>15</sup> This drastic finding is being used as an attempted basis for a pending antitrust case against Milgo by Codex in the Boston Court.

In *Barr Rubber Products Company v. Sun Rubber Company*, 425 F.2d 1114, at 1120-1121 (CA 2), cert. denied, 400 U.S. 878 (1970) relied upon by Milgo below, the Court reasoned that where a district court fails to "define the quantum of proof required in a civil, non-criminal case of this kind" (here a patent

<sup>14</sup> See, McCormick on Evidence (2d Ed. Cleary) § 340, p. 798 and Morgan, *Basic Problems of State and Federal Evidence* (5th Ed. Weinstein), p. 19.

<sup>15</sup> According to Judge Weinstein: "Quantified, the probabilities might be on the order of above 70% under a clear and convincing burden." *United States v. Fatico*, 458 F.Supp. 388 at 405, aff'd, 603 F.2d 1053 (2d Cir. 1979), cert. denied, 444 U.S. 1073 (1980).

case) it will be *assumed* from the "lower court's silence" that it applied a preponderance standard. The Second Circuit then reversed because:

Logic and reason demand that no lower standard of proof [than clear and convincing] be applied in assessing a charge of perjury, and especially so when a finding that material evidence has been falsified permits the allowance of attorneys' fees not otherwise recoverable. (footnote omitted.)

In *McDonnell v. American Leduc Petroleums, Ltd.*, 456 F.2d 1170 (CA 2 1972), the Second Circuit again reversed the trial court for failure to state what standard of proof it used. Judge Feinberg observed:

The gravity of a finding such as fraud or perjury requires at least some indication that the trier of fact has found that the complaining party has met the more rigorous standard of proof. *Id.* 1176.

The First Circuit, on the other hand, in the case at bar, confronted the Second Circuit head-on by saying:

"The relevant inquiry is not whether the district court expressly stated that it was applying the 'clear and convincing' standard but whether its findings do meet this standard." (App. G-15).<sup>18</sup>

The fundamental policy behind the requirement of clear and convincing proof is to insure greater accuracy of fact-finding in matters of grave consequence. As was stressed in *Santosky v. Kramer*, 455 U.S. 745, at 754-55 (1982), and in prior cases:

<sup>18</sup> It is clear from what the First Circuit said that it did *not* undertake any independent review of the evidence. It merely recited the District Court's findings (made without any apparent regard to the clear and convincing standard) and then asserted that they were "supported by the evidence."

The danger inherent in not ensuring a heightened sense of subjective certainty in the factfinder is dramatized by the First Circuit's wholesale adoption of these "findings." Included therein were both Ragsdale's non-existent admission that his patent had no novelty and Whang's non-existent admission that, in substance, his patent taught roll-off of 100% or less.

The function of a standard of proof, as that concept is embodied in the Due Process Clause and in the realm of fact-finding, is to 'instruct the factfinder concerning the degree of confidence our society thinks he should have in the correctness of factual conclusions for a particular type of adjudication.'

The complex facts and differing interpretations of those facts in highly technical cases such as this one and the magnitude of the potential amounts of fees to be shifted for punitive purposes because of inherently stigmatizing actions branded as misconduct require that the risk of erroneous determinations be reduced by this Court insisting upon adherence to the clear and convincing standard *acknowledged clearly* by the factfinder.

The First Circuit's approach directly contradicts the well reasoned logic of *Barr Rubber* and is not faithful to this Court's rationale for a heightened standard of proof as a procedural due process safeguard. This Court recognized in *Santosky v. Kramer*, *supra*, that:

Since the litigator and the factfinder must know at the outset of a given proceeding how the risk of error will be allocated the standard of proof must be calibrated in advance. 455 U.S. at 757

The court should not tolerate an omission that unnecessarily may prejudice the parties. Yet, this is exactly what the First Circuit purported to do. The First Circuit's approach overlooks the significance of having

... such a standard adequately [convey] to the factfinder the level of subjective certainty about his factual conclusions necessary to satisfy due process. 455 U.S. 769

The appropriate level of subjective certainty cannot be met unless the factfinder fully understands at the outset that he is engaged in an attempt to reach a significantly heightened level of



certitude.<sup>17</sup> McCauliff, *Burdens of Proof: Degrees of Belief, Quanta of Evidence, or Constitutional Guarantees*, 35 Vand. L. Rev. 1293, 1294 (1982).

This is particularly important since various fact-finders have not displayed a uniform understanding of the acknowledged higher level of proof. See Judge Weinstein's discussion in *United States v. Fatico*, 458 F.Supp. 388, and the results of the survey discussed in McCauliff, cited *supra*.

The general acceptance by the circuit courts of the requirement of a heightened standard of proof before 35 U.S.C. § 285 is applied demonstrates that something more is at stake than mere loss of money. Cf. *Santosky v. Kramer*, 455 U.S. 745, at 756 quoting *Addington v. Texas*. There is clearly an element of stigma in the present case. By finding both the inventor, Whang, and patent counsel, Jones, guilty of "deliberate fabrication" the District Court has blackened their reputations, caused them anguish, and exposed Jones to the possibility of disbarment proceedings.

It is particularly important for this Court to resolve the First and Second Circuits' conflicting approaches to lower court administration of the "clear and convincing" standard because that standard is becoming increasingly prevalent in many contexts. It is also essential to the maximum utility of the "clear and convincing" standard as a procedural safeguard that the Second Circuit's approach be approved and the First Circuit's approach which at best, waters down the standard and, at worst, renders it ineffective, be disapproved. If the First Circuit's approach is countenanced the "clear and convincing" standard will be a hollow safeguard, as this case demonstrates.

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<sup>17</sup> As was said in Comment "Evidence: Clear and Convincing Proof: Appellate Review" 32 Calif. L. Rev. 74 (1944) at 74:

Appellate courts may pay lip-service to a rule and it may be set forth in profound language in the reports and restatement, but if trial courts may disregard it without reversal, the rule is without effect.



Milgo's contention that the Court of Appeals committed legal error by failing to require the District Court to expressly articulate that it was applying a clear and convincing standard of proof on all subsidiary determinations upon which it based its ultimate conclusion of exceptionality is not only a complaint about a failure of procedural due process. Petitioner equally urges the Court to recognize the significance of this contention as it relates to the adjudication here of *patent validity*. The insight provided by the *Barr Rubber* court is apt:

Although the District Court purported to be resting its determination that Sun's patent was invalid on three independent bases, the conclusion is inescapable that the finding of perjury influenced the Court's disposition of the other two questions, obviousness and anticipation.

The District Court's opinion explicitly states that plaintiff's showing that he falsified evidence had been introduced in the Sixth Circuit and in the trial of the instant case constituted the most significant impetus for departure from the established rule that a '...decision on patent validity of another Federal Court, especially a higher one, is entitled to great weight...' (citation omitted) 425 F.2d at 1119-20.

The Boston Court's finding on "deliberate fabrication," flawed as it was by lack of awareness of the right standard of proof, contributed significantly to the failure of both it and the First Circuit to assess the technical and legal significance of the Whang '023 patent. As will be shown in the following section, examination of the appropriate language of the Whang '023 patent specification leads away from the Boston Court's decision as well as that of the First Circuit which is totally at odds with the Tenth Circuit.

- II. THIS COURT SHOULD GRANT THE WRIT IN ORDER TO REVIEW THE FIRST CIRCUIT'S FAILURE TO EVALUATE THE CRUCIAL LANGUAGE OF THE PATENT, TO CORRECT PREJUDICIAL ERRORS OF LAW, TO SET ASIDE CLEARLY ERRONEOUS OUTCOME DETERMINATIVE FINDINGS RESULTING IN AN IRRECONCILABLE CONFLICT WITH THE TENTH CIRCUIT WHICH UPHELD THE PATENT, AND TO SET ASIDE THE FINDING OF EXCEPTIONALITY UNDER 35 U.S.C. § 285.

It is the Petitioner's position that a finding of exceptional circumstances justifying an award of counsel fees, and the consequent blackening of reputations in the case at bar, can only be supported by "an unambiguous showing of extraordinary misconduct." See, e.g., *Arbrook, Inc. v. American Hospital Supply Corp.*, 645 F.2d 273 (CA 5 1981); *Novo Industries, A.S. v. Travenol Laboratories, Inc.*, 677 F.2d 1202 (CA 7 1982); *Colortronic Reinhard & Co. v. Plastic Controls, Inc.*, 668 F.2d 1, 8 (CA 1 1981); *Park-Inn Theatres v. Perkins*, 190 F.2d 137 (CA 9 1951).

An award of fees and the drastic non-monetary consequences which will follow this determination should have been affirmed only if the Boston Court's opinion was free of clearly erroneous findings materially affecting its determination and free of findings based upon mistakes of law. The affirmance of the ultimate conclusion of "deliberate fabrication" should only stand if the Court of Appeals ascertained properly that the Boston Court had scrutinized and understood the language of the patent said to be crucial by the petitioner from the standpoint of one skilled in the art, and assessed the technical and legal significance of the specification according to settled principles of patent interpretation.

For the reasons set forth below petitioner contends that none of these predicates occurred and, to prevent a miscarriage of justice, review of these significant errors of the Court of Appeals by this Court should occur.

- A. The District Court's "Deliberate Fabrication" Conclusion Was Not Only Flawed By An Improper Standard Of Proof, It Was Also Derived From A Misapprehension As To Why The Patent Office Issued The Whang '023 Patent.

The District Court found that a misrepresentation of a prior art reference evaluated by the examiner was "apparently a significant factor in securing the allowance of present claims 1, 19 and 25 of the '023 patent" (App. D-15). This finding clashes with the settled legal principle that when a prior art reference is before the examiner, as the Irland reference was, such a putative misrepresentation is legally irrelevant. *Skill Corp. v. Lucerne Products, Inc.*, 489 F.Supp. 1129, 1161 (N.D. Ohio E.D. 1980), *aff'd*, 684 F.2d 346 (CA 6), *cert. denied*, 103 S.Ct. 347 (1982); *General Tire & Rubber Co. v. Jefferson Chemical Co.*, 363 F.Supp. 871, 878, n.13 (S.D.N.Y. 1973), *rev'd on other grounds*, 497 F.2d 1283 (CA 2), *cert. denied*, 419 U.S. 968 (1974). See also, *Plastic Container Corp. v. Continental Plastics of Oklahoma, Inc.*, 607 F.2d 885, 900 (CA 10 1979), *after remand*, 515 F.Supp. 834 (W.D. Okl. 1981). Moreover, the District Court completely ignored examiner Frommer's affidavit (offered in support of petitioners' motion for a new trial, which the Court of Appeals failed to address) indicating that he had in fact not been misled, as well as aspects of the file history and patent making its view of what happened improbable. See, e.g., App. B-36-38; Col. 332-41, App. A-9; Col. 6:39-43, App. A-10.

This error was further compounded by the utter failure of the District Court to make findings spelling out *why* the three prior art references not before the examiner were "significant," (App. D-14), and how they bore on the situation as is required by *Graham v. John Deere Co.*, 383 U.S. 1, at page 17. *Aluminum Co. of America v. Amerola Products Corp.*, 552 F.2d 1020, 1024-25 (CA 3 1977). *Houston v. Polymer Corp.*, 637 F.2d 617, 619 (CA 9 1980).

- B. The District Court's Deliberate Fabrication Conclusion Was Flawed By Its Misconception That Both Whang And Ragsdale Made Outcome Determinative Admissions Destroying The Asserted Novelty Of Their Respective Patents.<sup>18</sup>

In the course of his testimony, Whang said:

Since I was teaching as making it [the filter means] *as narrow as possible* and the *reason why* and left that up to the judgment of the engineers with all their filter capabilities to make [the filter] *as narrow as possible*. A IV: 2681 [bracketed material inserted for clarity].

The Boston Court seized upon this testimony and transformed it into a finding, directly impeaching Whang's "50% or less" Kansas testimony and eviscerating the Kansas Court's legal conclusion that Whang's filter means were a non-obvious improvement over Bennett and Davey's preference for phase modulated modem systems with 100% roll-off:

[A]s Whang himself *testified* at one point, Whang left it to the design engineer to determine the roll-off characteristics of the composite filter anywhere within the limits of the Nyquist criterion, i.e., from *zero to 100%*, depending upon the requirements of the particular application. (App. D-21). (emphasis added).

During the course of Ragsdale's testimony, this key exchange occurred between Ragsdale and the Court:

THE COURT: Well, do I correctly understand that the thing you devised is really a means of developing a signal patent by identifying groups of bits as having to do with phase modulation and other groups of bits as having to do

<sup>18</sup> Petitioner also sought enforcement below of U.S. Patent No. 3,619,503 (Ragsdale '503) invented by Mr. Ragsdale and assigned to petitioner.

with amplitude modulation? Is that what you say is a new thing here?

RAGSDALE: *Combined with the band limiting feature, yes, sir.*<sup>19</sup>

Notwithstanding this testimony, the Boston Court found that petitioners: "... have attempted to assert the Ragsdale '503 patent which the inventor himself admitted had no novelty in the claims asserted in this trial." (App. D-27-28).

On appeal, petitioner asserted that both of these supposed admissions were nonexistent and challenged Codex to provide the Court with evidentiary support in the record for the Boston Court's findings. Codex did not do so. Instead of setting aside these findings, *Dayton Board of Education v. Brinkman*, 443 U.S. 526, 534 n.8, *reh. denied*, 444 U.S. 887 (1979), the Court of Appeals embraced and relied upon the zero to 100% roll-off finding as the basis for ruling that the specification failed to meet the requirements of definiteness required by 35 U.S.C. § 112, an issue never discussed by the District Court, nor addressed by the parties on appeal. (App. G-8-9). The Court held that the Ragsdale admission was "supported by the evidence." (App. G-16).

Admissions can play a critical role in the outcome of a trial and an in-court admission by the defendant's key witness as to a pivotal fact is almost certain to be fatal to the defendant's case. If, however, the trier of fact mistakenly assumes an admission which was not in fact made, then the defendant's case has been unfairly and irretrievably prejudiced. If the admission is not in evidence, the defendant will have no opportunity to refute or combat the erroneous assumption, not only as to its existence, but its effect on the overall credibility of a party's presentation of evidence.<sup>20</sup> Moreover, the defendant will not be on fair notice that such an assumption has been made.

<sup>19</sup> A V: 2950.

<sup>20</sup> The defendant's ability to counter the erroneous assumption is limited to post-trial opportunities which are severely restricted. *Campbell v. Spectrum Automation Co.*, 601 F.2d 246, 252 (CA 6 1979).

When the trier mistakenly assumes the existence of critical testimony the very purpose of the trial is thwarted. The aggrieved party has been deprived of a reasoned assessment of his case on the merits and has become a victim of misperception. This Court should enforce the Court of Appeal's duty to set aside the nonexistent admissions as being clearly erroneous.

C. The Court of Appeals' Failure To Properly Evaluate The Technical And Legal Significance Of The Crucial Language Of The Whang '023 Patent Permeated Its Entire Review Of The Claimed Impropriety Of The Boston Court's Ultimate Decision.

The Court of Appeals failed to review the decision of the Boston Court on the basis of the undisputed principle that a patent must be construed on the basis of its teaching to a person of ordinary skill in the art. Instead, the Court of Appeals erroneously reviewed the language of the patent only to determine whether specified terminology was employed in the patent, namely the "narrow skirts" or "50% roll-off" characterizations of a complex scientific concept.

The actual language of Whang '023 teaches the person of ordinary skill in the art to build such a filter, but uses other terminology also known to the ordinary practitioner:

There is precaution to observe in the band limiting process. It is not difficult to build a bandpass filter with pass-band of 800 Hz centered at 1700 Hz. However, the filter in general introduces a great deal of delay distortion. *It has been found that it is better to reject unnecessary signal components outside the selected narrow band as much as possible. However, increased rejection of components of signal outside the band result in more delay distortion.* (Col. 5:74-75, App. A-10; Col. 6:1-7, App. A-10). (emphasis added).



In order to deal with the increased delay distortion caused by "sharp roll-off" (the increased rejection of components of signal (energy) outside of the band), Whang prescribes: "Adding a fixed delay correction network until the delay variation added by the filter is made as small as desired." Col. 6:12-14, (App. A-10). Several references are given, including R.M. Lerner which teaches specific design techniques (of such bandpass filters with linear phase . . .). Col. 6:14, 20-22 (App. A-10).

The patent specification further advises one skilled in the art that:

With a delay equalized bandpass filter, all the telephone channels *can be made* to look similar. Filters as here contemplated have smaller bandwidth than most telephone lines but have the advantage that all the lines are now very much alike within the limits of the passband, and the extra delay distortion so introduced is fixedly compensated along with fixed compensation for the average line characteristic.

[T]his use of a fixed delay compensated narrow-band filter to make all the telephone lines appear approximately the same and dependable, thus to eliminate the need of a variable equalizer for high bit rates, is a unique feature of this invention. Col. 6:26-34, 39-43, (App. A-10) (emphasis added).

Whang further explained his invention in these words:

The idea in band limiting is to guarantee a minimum necessary bandwidth in good condition which minimum bandwidth is the inverse of the modulation period, and, at the same time, make the bandwidth narrow enough to make all lines essentially the same, thereby eliminating the need for a variable equalizer and achieving a new result of a kind long sought without success. Col. 16:11-17, (App. A-15).



Claims 1, 19, and 25, set forth at Col. 16:47-75, (App. A-15); Col. 19:17-42, (App. A-17); and Col. 20:19-45, (App. A-20), were recognized by the Court of Appeals as being "means plus function" claims which required that the court turn to the specification for explanation.

The pertinent language of Claim 1, for example, dealing with the filter means is as follows:

Filter means connected in the signal transmission link and characterized as passing signals in the frequency range defined as  $\pm 500$  Hz on either side of a center frequency,  $f_0$ , selected from 1600 Hz through 1800 Hz, the filter means characterized as having a passband width of  $1/T$  Hz and having a center frequency of  $f_0$  where:  $T$  is the modulation period,  $f_0$  is the carrier signal frequency, and Hz is cycles per second. Col. 16:57-66, (App. A-15).

The Court of Appeals found: "...contrary to Milgo's assertion we do not find *any language* in the specification describing narrow skirts." (App. G-8) (emphasis added).

In reaching this conclusion, the Court of Appeals was required to apply the settled law that the *meaning of the words employed* had to be determined in accordance with what they taught a person of ordinary skill in the art at the time of the filing of the patent application. *Eibel Process Co. v. Minnesota & Ontario Paper Co.*, 261 U.S. 45, 65-66 (1923); *Corning Glass Works v. Anchor Hocking Glass Corp.*, 374 F.2d 473, 478 (CA 3), *cert. denied*, 389 U.S. 826 (1967). Further, the Court of Appeals was required to apply the legal principle that it did not matter whether the words of the patent employed specific quantitative terms as long as a person of ordinary skill would have been able to understand and practice the invention *without undue experimentation*. *Corning Glass Works, supra*, at 478. Such a person must be considered to read the patent in light of the prior knowledge and experience which he brings to the task. *Loom Co. v. Higgins*, 105 U.S. 580, 585-586 (1881).

Whang asserted, as the District Court found, that the novelty of his invention was a combination of elements (differential phase modulation, limiting the passband to  $1/T$  Hz and center sampling) with severe band limiting:

By severe band limiting he means a passband of  $1/T$  Hz and confinement of substantially all the passed energy within the 'sweet spot'.<sup>21</sup> (App. D-18).

The Boston Court further found:

*According to Whang, specifications made it clear that substantially all of the energy outside the 'sweet spot' should be attenuated [rejected].* (App. D-19) (emphasis added) [bracketed material inserted for clarity].

The Boston Court found, and the Petitioner agrees, that the composite filter means relevant to this case is a filter which limits energy, ideally, to the so-called Nyquist band, always described as  $1/T$  Hz. (App. D-11). An ideal Nyquist filter would not permit *any* energy to be transmitted outside of the passband, but it cannot be built. (App. D-11). Filters allow unnecessary signal components outside of the  $1/T$  Hz passband to pass. Filters have "skirts" which the court found referred to the "frequency ranges outside the passband at which some significant energy is transmitted. . . ." (App. D-12) (emphasis added). The Bell 201 modem series also used a  $1/T$  Hz Nyquist passband.

It has been Whang's consistent position that the principle expressed in his patent which distinguished his invention from the prior art was his decision to: "reject unnecessary signal components outside the selected narrow band as much as possible." (Col. 6:3-5, App. A-10). This was the language in the specifications which made it clear that "substantially all of the energy outside the 'sweet spot' should be attenuated [rejected]." (App. D-19) (emphasis added) [bracketed material inserted for clarity].

<sup>21</sup> The term "sweet spot" was a euphemism adopted at the trial to designate the 1000 Hz range between 1200 Hz and 2200 Hz in the usable portion of the ordinary telephone line utilized by Whang as the dependable band in his preferred embodiment.

Indeed, the District Court appeared to prove petitioner's case when it utilized that very language in wringing significant admissions from Codex Vice President and principal expert, Dr. Forney:

THE COURT: Do you get *increased rejection* of components of signal outside the band when the skirts are *wide*?

DR. FORNEY: *No.*

THE COURT: *You get increased rejection when the skirts are narrow?*

THE WITNESS: *Yes.* That says the sharper you make the skirts, the worse your delay distortion problem is going to be. (emphasis added)

This exchange between Forney and the Court is the pivotal evidence in this protracted case. Taking Forney's testimony as that of one skilled in the art at the time in question, it unequivocally demonstrates that rejecting components of signal outside the band "as much as possible" *was known to occur* only when the skirts are narrow, and implicitly requires that the skirts be made as narrow as possible in order to reject energy as much as possible. Correlatively, Whang's instruction to reject "as much as possible," coupled with Forney's admission, precludes the Boston Court's interpretation of the Whang '023 patent specification as teaching the use of filter skirts that were wide, i.e., "100% cosine roll-off."

Indeed, the District Court made this essential finding:

The narrower the skirts, i.e., the lower the percentage of roll-off, the more efficient the filter is at attenuating [rejecting] the energy outside the passband. (App. D-12).

Nevertheless, neither the Boston Court nor the Court of Appeals interpreted the "reject . . . as much as possible" language of the specification as either expressly or impliedly teaching the use of a narrow skirted filter, even though Forney's testimony and the Boston Court's finding noted above are irreconcilable with any

other interpretation. In sharp contrast, the Kansas Court interpreted the critical language referred to above, and construed the precise language of the Whang '023 patent specification as teaching and claiming severe band limiting:

The filter means of the Whang patent must limit the energy spectrum *as close as practical* to the so-called Nyquist band (e.g., 800 Hz for 2400 bps and 1600 Hz for 4800 bps) in order to use the minimum telephone bandwidth for transmitting signal energy.

[T]he term passband width<sup>22</sup> of about  $1/T$  Hz as used in the Whang '023 patent *defines a filter which passes signals having frequencies within the passband of  $1/T$  Hz, i.e., 800 or 1600 Hz and rejects within a few percent all signals having frequencies more than 25% of the passband, i.e., 800 to 1000 Hz [the preferred embodiment for 2400 bps] and 1600 to 2000 Hz [the preferred embodiment for 4800 bps] (citation omitted) (emphasis added) [bracketed material inserted]* (App. B-47-48).

Moreover, even though Forney admitted and the District Court found that "sharp roll-off also increases the delay distortion within the passband..." (App. D-12), both the Boston Court and the Court of Appeals ignored the obvious relationship between the admission and finding and the plain language in the patent specification that: "Increased rejection of components of signal outside the band results in more delay distortion." Col. 6:5-7, (App. A-10). Both the Boston Court and the Court of Appeals ignored the explicit language in the specification teaching specific methods to compensate for the increased delay distortion resulting when energy outside the selected band is rejected "as much as possible." Col. 6:10-14, (App. A-10).

<sup>22</sup> The District Court's finding that Whang's passband was measured at -3db was clearly erroneous. (App. D-19). The court found Whang's patent used a Nyquist passband, App. D-13, and Nyquist passbands are conceded to be found only at -6db. A III: 1370.

Both Forney's admission and the District Court's finding about the increase of delay distortion caused by the use of "sharp roll-off" i.e., "narrow skirts" is irreconcilable with the concurrent findings of the Boston Court and the Court of Appeals that the Whang '023 patent neither expressly nor by implication teaches "narrow skirts."

In laymen's language, it could be said that in prior art phase modulated modem systems, energy outside the Nyquist passband was rejected as little as possible—resulting from the use of a wider energy spectrum. Comparatively, Whang's phase modulated modem system rejected energy outside of the Nyquist passband "as much as possible" thus achieving bandlimiting by using filter skirts as "narrow as possible."

This principle was implicitly understood by the Kansas Court when it analyzed and construed properly the meaning of the *phrase*: "passband width of about  $1/T$  Hz" as used in Whang '023 patent claims 19 and 25, since that Court interpreted the filter means consistently with the direction in the specification to "reject (energy) . . . as much as possible." This *phrase* was found to have had a "special meaning" when compared to prior art phase modulated modem systems using a Nyquist band rejecting energy "as little as possible," i.e., having a wide band energy spectrum. This was the true purport of the expression "special meaning." The Kansas Court's analysis was unfortunately misread by the Boston Court and Court of Appeals as a misapplication of the "lexicographer rule," see App. D-26 and App. G-11, which it was not.

The failure of the Boston Court and the Court of Appeals to grasp the technical and legal significance of the language of the Whang '023 specification and to apply the proper rules of patent construction has resulted in misconception, as well as factual and legal error, including the loss of comity to the Tenth Circuit's decision.

The Court of Appeals' preoccupation with "cosine roll-off" rather than the meaning of the "reject . . . as much as possible"

language, to one skilled in the art, resulted in its misunderstanding petitioner's contention about definiteness and its misapplication of *Eibel Process Company v. Minnesota & Ontario Paper Company*, 261 U.S. 45 (1923).

Milgo argued on appeal, in substance, that when compared to prior art moderns utilizing a wider energy spectrum, the "reject as much as possible" language constituted a qualitative distinction nevertheless definite under *Eibel Process Company v. Minnesota & Ontario Paper Company*, cited, *supra*. The Court of Appeals ignored the "reject as much as possible" language of the Whang '023 specification and found:

In *Eibel* the critical factor was pitch; in Whang '023 it is the 50% roll-off. Whang '023, unlike the patent in *Eibel*, gives no numerical representations of the critical factor. Neither does it discuss the percentage roll-off in prior art so as to indicate to those skilled in the art that a roll-off of 50% or less is an essential element in the function of Whang '023. (App. G-9).

The Court of Appeals mis-applied *Eibel*, because it assumed that a factor unknown to Whang at the time he drew his patent specification (cosine roll-off) was a "critical factor," even though it was at best only a mathematical expression of theoretical utility. Moreover, the Court of Appeals *assumed* that equivalent cosine roll-off was a widely accepted technique of differentiating filter skirts in the prior art.<sup>22</sup> In fact, except for Bennett & Davey, which neither Whang nor the patent examiner was aware of, no prior art offered in evidence used cosine roll-off as a technique for differentiating filter skirts.

A correct comparison would have been made between *Eibel* and Whang '023, if made between comparable things—and not

<sup>22</sup> The Boston Court made no such finding. Moreover, Bennett & Davey, the only prior art reference to use cosine roll-off as a tool for differentiation, was believed by the Boston Court to have been published in 1962. (App. D-14). The Court of Appeals correctly noted it was published in 1965, (App. G-11), just before the Whang '023 application was filed in 1966.



between qualitative terms on the one hand and quantitative terms on the other hand. In particular, Eibel's qualitative "pitch" should have been compared to Whang's qualitative "bandlimiting" critical-factor (i.e., "to reject unnecessary signal components outside the selected narrow band *as much as possible*," ) Col. 6:3-5, (App. A-10), (emphasis added).

There was no finding below that anyone of *ordinary skill* in the art would have understood or used cosine roll-off, much less "equivalent" cosine roll-off, to indicate to others skilled in the art "skirt" differentiation. Forney's admission that there is no increased rejection of components of signal outside the band when the skirts are wide, but more rejection the narrower the skirts, gives sufficient guidance to those skilled in the art because Whang said to "reject . . . *as much as possible*." That was sufficiently definite in Kansas, and properly applied, should have been sufficient below.

The writ should be granted in this case because two important constitutional issues are presented, which also have implications for the efficient use of judicial resources. First, whether, as a matter of procedural due process, a trier of fact must state expressly the standard of proof being applied on a given issue of fact when the law requires the application of a higher standard than the "preponderance" of the evidence. Two respected Circuit Courts of Appeal disagree completely on this vital question, and the question should be resolved.

Second, the essentially constitutional issue, *A&P Tea Co. v. Supermarket Corp.*, 340 U.S. 147 (1950) (Douglas, J. concurring) of whether a patentee is entitled to have the courts evaluate the language of its patent said to describe the invention is crisply presented by the conflict between the Tenth Circuit which did so and upheld this important patent, and the First Circuit which did not. *Dow Co. v. Halliburton Co.*, 324 U.S. 320, 322 (1945) ("The conflicting views of the appellate courts concerning the validity of the same patent led us to grant certiorari in this case, 322 U.S. 719, and oblige us to decide independently the factual



issue of validity. *Universal Oil Co. v. Globe Co.*, 322 U.S. 471, 473 (1944) )."

Third, while the "independent evaluation" and "pertinence of prior art" issues raised here are lesser issues, they *are* issues of first impression, and their resolution would reduce the scope of patent litigation, as well, as permit petitioner to have its patent adjudicated, and its conduct evaluated, free of palpable error.

Finally, this Court cannot tolerate the use of non-existent evidence, which has here prejudiced the rights of the petitioner, sullied the reputations nationally of a brilliant inventor and an advocate, and tainted the perceptions of the lower courts, to support a punitive award of fees of this magnitude, where a Circuit Court of Appeals failed in its duty. *Dayton Board of Education v. Brinkman*, 433 U.S. 526, 534, n.8 (1979).

### Conclusion

For the reasons stated above, the petition for certiorari should be granted.

Respectfully submitted,

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